

Notice of Allowability

Application No.

10/510,415

Examiner

Kiet Doan

Applicant(s)

CAMERON, RICHARD NEILL

Art Unit

2683

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 09/30/05.
2. ☒ The allowed claim(s) is/are 1, 3-5, 7-9, 16, 20-25 have been renumbered 1-14 respectively.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some* c) ☐ None of the:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|---|--|
| 1. <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 2. <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | 6. <input checked="" type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____ |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date _____ | 7. <input type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____ |

DETAILED ACTION

This office action is response to amendment file on 09/30/2005.

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Marc V. Richards on 11/22/2005 and 12/09/2005.

The application has been amended as follow:

Claims 2, 6, 10-14, 17-19 are cancelled.

Claim 1. A localization method of a mobile station communicating with at least one central server through a wireless network comprising a plurality of wireless radiofrequency transmitting access points, among which a first access point is chosen to perform the communication, comprising:

measuring signal strengths received by said mobile station from the plurality of access points;

storing each measured signal strength with an address identifying the corresponding connected access point; comparing said stored strengths to values of a predetermined table of signal strength thresholds assigned to access points, the signal strength thresholds defining one or more event zones (EZ) each event zone (EZ) comprising one or more attenuation ranges of one or more access points; and

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considering the mobile station as located in a given event zone if the measured signal strength corresponding to an access point in the given event zone is within an attenuation range of that access point,

in which said attenuation ranges are a function of the environment and of an shape of a event zones (EZ).

Claim 3. A communication method between at least one mobile station and at least one central server through radiofrequency transmitting access points to which said station is wireless connectable, comprising:

establishing a communication between said station and said central server through a first access points of said access point from which said station receives a highest signal strength;

comparing a signal strength received by said mobile station from at least one second access point with at least one signal strength threshold used for defining at least one event zone (EZ); and

making available for said mobile station at least one specific application of the central server if the station is considered in the event zone,

in which the station is considered as being in the event zone by applying a localization method, the localization method comprising:

measuring signal strengths received by said mobile station from the plurality of access points;

storing each measured signal strength with an address identifying the corresponding connected access point;

comparing said stored strengths to values of a predetermined table of signal strength thresholds assigned to access points, the signal strength thresholds defining one or more event zones (EZ) each event zone (EZ) comprising one or more attenuation ranges of one or more access points; and

considering the mobile station as located in a given event zone if the measured signal strength corresponding to an access point in the given event zone is within an attenuation range of that access point.

Claim 8. A communication system between at least one mobile station and at least one central server through radiofrequency transmitting access points to which the station is wireless connectable, comprising:

means to define, with at least a signal strength threshold of at least one access point, at least one event zone (EZ) in which at least one specific application of the server is to be available to the station if present in that zone; and

means to localize the mobile station with respect to an event zone boundary, based on a signal strength received by the mobile station from the access points,

a communication between the mobile station and the central server through a first access point of said access point from which said station receives the highest signal strength;

compare signal strength received by the mobile station from at least one second access point with at least one signal strength threshold used for defining at least one event zone (EZ); wherein

a specific application is available for the mobile station if the mobile station is considered in the event zone (EZ); wherein

the mobile station is considered to be in the event zone if the received signal strength is lower than the threshold; wherein

the mobile station is considered to be in the event zone if the received signal strength is higher than the threshold.

Claim 16. A wireless communication system, comprising:

a server in communication with a plurality of wireless access point having an access point address assigned to each access point; and

a database comprising an event zone table of the access point addresses and corresponding signal strength thresholds wherein each event zone is defined at least with a signal strength threshold;

wherein server is operable to receive signal level measurements and assigned access point address from a mobile station configured to measure signal level received from the multiple access point, and to compare the received signal level measurement with a signal strength threshold for the assigned access point and determine whether the mobile station is located in the defined event zone; wherein

each event zone is further defined with a signal attenuation range around one or more access point; wherein

the multiple access point comprise a first access point and a second access point configured to be in the same event zone and a first signal attenuation range around the first access point is different from a second signal attenuation range around the second access point in the same event zone; wherein

the first signal attenuation range and second signal attenuation range overlap and the mobile station operates in at least one of the first signal attenuation range or the second signal attenuation range.

Allowable Subject Matter

The following is an examiner's statement of reasons for allowance:

The prior art record, Diepstraten (Patent No. 5,991,287) teaches a localization method of a mobile station communicating with at least one central server through a wireless network comprising a plurality of wireless radiofrequency transmitting access points, among which a first access point is chosen to perform the communication (C3, L57-67, L1-3, Fig.1, Illustrate central server as No.20, access points as No.40-42), comprising:

measuring signal strengths received by said mobile station from the plurality of access points (C3, L58-67, Fig.2, teach measuring signal which read on monitor the quality).

Engwer (Patent No. 5,987,062) teaches storing each measured signal strength with an address identifying the corresponding connected access point;

comparing said stored strengths to values of a predetermined table of signal strength thresholds assigned to access points (C2, L31-67, C3, L1-7, teach comparing and storing the signal strength).

However, the combine of Diepstraten and Engwer **fails to suggest or fairly teach** the signal strength thresholds defining one or more event zones (EZ) each event zone (EZ) comprising one or more attenuation ranges of one or more access points; and

considering the mobile station as located in a given event zone if the measured signal strength corresponding to an access point in the given event zone is within an attenuation range of that access point,

in which said attenuation ranges are a function of the environment and of an shape of a event zones (EZ) as substantially connected and specific detail including all limitations as particularly recited in claim 3, 8, 16.

Claims 4-5, 7, 9, 20-25 are allowed as being dependent on the independent claims 3, 8 and 16.

Conclusion

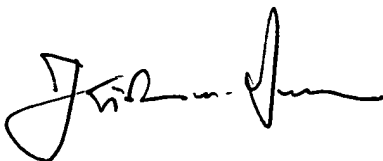
Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kiet Doan whose telephone number is 571-272-7863.

The examiner can normally be reached on 8am - 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Trost can be reached on 571-272-7872. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Kiet Doan
Patent Examiner



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